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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,175	11/01/2001	Peter H. Seeberger	MTV-018.02	7902
25181	7590	09/29/2003		
FOLEY HOAG, LLP PATENT GROUP, WORLD TRADE CENTER WEST 155 SEAPORT BLVD BOSTON, MA 02110			EXAMINER KHARE, DEVESH	
			ART UNIT 1623	PAPER NUMBER

DATE MAILED: 09/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application N .</b>	<b>Applicant(s)</b>
	10/033,175	SEEBERGER ET AL.
	Examiner Devesh Khare	Art Unit 1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,23 and 42-45 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1,23 and 42-45 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 09 June 2003 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.<br> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)     |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.<br> | 6) <input type="checkbox"/> Other: _____  |

The amendment received on 06/12/03 has been entered. The applicant's remarks on the rejection of claims 1,23 and 42-44 are acknowledged. Claims 2-22 have been cancelled. The rejection of claims 1 and 23 under 35 U.S.C. 102(b) have been overcome through applicants' amendment to the claims.

Claims 1,23,42-44 and newly added claim 45 are currently pending in this application. An action on the merits of claims 1,23,42-45, is set forth herein below.

**Provisional "Non-Statutory" Double Patenting Rejection**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,23 and 42-45 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17-19 of U.S. Patent No.6,323,339('339) of the applicants in view of Sabesan(U.S. Patent 5,095,123). The applicants' claims are directed toward phosphate-based glycosyl donors oligosaccharides of formula 1 and 2 (claims 1 and 45) and a method of synthesizing a compound represented by formula 1 by reacting a 1,2-anhydrosugar with an oxidizing

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agent and phosphoric acid. Additional limitations include the compounds of claim 23 and the oxidizing agent dioxirane.

Like the instantly claimed invention, the '339 patent discloses a method of synthesizing a compound represented by 1 in claim 17 where variables X is O, NR', or S, Y is NR' or S and Z is O, NR' or S, by reacting a 1,2-anhydrosugar with an oxidizing agent and phosphoric acid, is within the scope of the instant claims (see table in col.51 and claims 17-19). The issued patent '339 differ from the present application in that it does not claim the compounds of formula 1 and 2 and the synthesis of a specific compound (represented by formula 1) where variable Y is O.

The Sabesan's patent discloses the glycosyl phosphate compounds (see abstract and claims). In col.3, lines 42-65, the glycosyl phosphate triesters of formula I and II are disclosed. The disclosure in col. 5, Reaction scheme 1, wherein compounds obtained from the phosphorylation of hexopyranose compounds are disclosed, is within the scope of the instant claims 1 and 23. See especially the compounds disclosed in col. 9, examples 2,3 and 5.

It would have been obvious to person having ordinary skill in the art at the time the invention was made, to select values for variables in the carbohydrate moiety and in the phosphate ester moiety from among those taught by Sabesan, because Sabesan had disclosed that such compounds were useful as glycosyl donors (see col.2, lines 19-22). Applicant has not demonstrated any criticality or unexpected result, which stems from selection of particular values for the variable.

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The examiner notes the instant claims and the '339 claims do indeed substantially overlap and this obviousness-type double patenting rejection is necessary to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**35 U.S.C. 103(a) rejection**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

Claims 1,23 and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over claims 17-19 of U.S. Patent No.6,323,339('339) of the applicants in view of Sabesan(U.S. Patent 5,095,123).

The applicants' claims are directed toward phosphate-based glycosyl donors oligosaccharides of formula 1 and 2 (claims 1 and 45) and a method of synthesizing a compound represented by formula 1 by reacting a 1,2-anhydrosugar with an oxidizing agent and phosphoric acid. Additional limitations include the compounds of claim 23 and the oxidizing agent dioxirane.

The '339 patent teaches a method of synthesizing a compound represented by 1 in claim 17 where variables X is O, NR', or S, Y is NR' or S and Z is O, NR' or S, by reacting a 1,2-anhydrosugar with an oxidizing agent and phosphoric acid, is within the scope of the instant claims (see table in col.51 and claims 17-19). The issued patent '339 differ from the present application in that it does not claim the compounds of formula 1 and 2 and the synthesis of a specific compound (represented by formula 1) where variable Y is O.

The Sabesan's patent discloses the glycosyl phosphate compounds (see abstract and claims). In col.3, lines 42-65, the glycosyl phosphate triesters of formula I and II are disclosed. The disclosure in col. 5, Reaction scheme 1, wherein compounds obtained from the phosphorylation of hexopyranose compounds are disclosed, is within the scope of the instant claims 1 and 23. See especially the compounds disclosed in col. 9, examples 2,3 and 5.

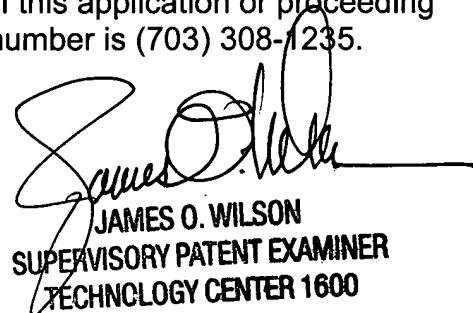
It would have been obvious to person having ordinary skill in the art at the time the invention was made, to select values for variables in the carbohydrate moiety and in the phosphate ester moiety from among those taught by Sabesan, and produce these glycosyl donor compounds as taught by the '339 patent. The motivation for doing so is provided by Sabesan which suggests that such compounds were useful as glycosyl donors (see col.2, lines 19-22). Applicant has not demonstrated any criticality or unexpected result, which stems from selection of particular values for the variable.

**2. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Devesh Khare whose telephone number is (703)605-1199. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, Supervisory Patent Examiner, Art Unit 1623 can be reached at 703-308-4624. The official fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-4556 or 308-4242. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Devesh Khare, Ph.D.,JD(3Y).  
Art Unit 1623  
September 24, 2003



JAMES O. WILSON  
SUPERVISORY PATENT EXAMINER  
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